



Apr 4th, 1:30 PM - 3:00 PM

Cumulative Effects on Southern Resident Killer Whales (*Orcinus orca*)

Sharlene Shaikh

Fisheries and Oceans Canada, Canada, sharlene.shaikh@dfo-mpo.gc.ca

Cecilia Wong

Environment and Climate Change Canada

Michael Rylko

United States Environmental Protection Agency

Todd Hass

Puget Sound Partnership

Follow this and additional works at: <https://cedar.wwu.edu/ssec>



Part of the [Fresh Water Studies Commons](#), [Marine Biology Commons](#), [Natural Resources and Conservation Commons](#), and the [Terrestrial and Aquatic Ecology Commons](#)

Shaikh, Sharlene; Wong, Cecilia; Rylko, Michael; and Hass, Todd, "Cumulative Effects on Southern Resident Killer Whales (*Orcinus orca*)" (2018). *Salish Sea Ecosystem Conference*. 603.
<https://cedar.wwu.edu/ssec/2018ssec/allsessions/603>

This Event is brought to you for free and open access by the Conferences and Events at Western CEDAR. It has been accepted for inclusion in Salish Sea Ecosystem Conference by an authorized administrator of Western CEDAR. For more information, please contact westerncedar@wwu.edu.

2018 SSEC Proceedings – SRKW Session Descriptions

Session 1.1 – Cumulative Effects on Southern Resident Killer Whales (*Orcinus orca*)

A suite of anthropogenic threats threaten the survival and recovery of the Salish Sea's endangered Southern Resident Killer Whale population (SRKW). With their population level at a historic low (78 individuals as of 2018), this session focused on how to assess and manage the cumulative effects of the threats SRKW face.

Ray Harris of Chemainus First Nation explained the importance of “Blackfish” to the Coast Salish People and others living in the Salish Sea region. He drew parallels between the community structures and threats facing both our own communities and that of the killer whale.

Dr. Shawn Larson highlighted the importance of long-term monitoring through Orca Master, the Whale Museum's comprehensive species sightings database (acoustic data recently added). With data dating back to 1976, Shawn explained the shift in SRKW distribution over time.

Dr. Rob Williams analyzed the cumulative effects of the three key threats to SRKW - reduced prey, vessel disturbance and contaminants - and the scenarios for achieving recovery targets. He showed how modest increases in Chinook prey, and reductions in vessel disturbance, could have a greater influence on population growth than a large increase in prey alone.

Dr. Darren Croft shared his research on the social networks of SRKW. In years of low salmon abundance, socially integrated males have a higher chance of survival than socially peripheral ones likely due to prey sharing events. Also, individuals did not increase their connectedness in these years. The influence of social integration on SRKW survival was not observed in years of high salmon abundance or for females.

Colleen Weiler presented an ecosystem approach for SRKW recovery. Restoring some of the Salish Sea's important river ecosystems, such as B.C.'s Fraser or the Columbia Basin's Snake River, can increase salmon prey for SRKW and reduce the intensity of impact noise and contaminants can have on the population. Colleen presented a successful case study of salmon rearing habitat restoration in the Elwha River.